

**WHAT IS CLAIMED IS:**

1. A method for detecting interconnect and bridge faults in a system, said method comprising:

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transmitting a first data via a first transmitter, wherein the first data corresponds to  
a first placement designation;

transmitting a second data via a second transmitter, wherein the second data

10 corresponds to a second placement designation, and wherein the second  
placement designation is different than the first placement designation;

receiving the first data at a first receiver;

15 receiving the second data at a second receiver; and

detecting a fault in response to determining one or both of the received first and  
second data do not match an expected data.

20 2. The method of claim 1, wherein said first transmitter and second transmitters are  
adjacent, said first placement designation corresponds to said first transmitter, said  
second placement designation corresponds to said second transmitter, and wherein said  
first and second receiver are not adjacent.

25 3. The method of claim 1, wherein said first receiver and said second receiver are  
adjacent, said first placement designation corresponds to said first receiver, said second  
placement designation corresponds to said second receiver, and wherein said first and  
second transmitters are not adjacent.

4. The method of claim 1, wherein said first receiver and said second transmitter are adjacent, and wherein said first placement designation corresponds to said first transmitter, and said second placement designation corresponds to said second transmitter.

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5. The method of claim 1, wherein said first receiver and said second transmitter are adjacent, and wherein said first placement designation corresponds to said first receiver, and said second placement designation corresponds to said second receiver.

10 6. The method of claim 1, further comprising assigning placement designations to transmitters and receivers, wherein the placement designation are assigned such that no two adjacent transmitters or receivers have the same placement designation.

15 7. The method of claim 6, wherein each of the placement designations are selected from one of seven unique designations.

8. The method of claim 1, wherein each of the first and second data comprise a binary test pattern stream, and wherein the second data is distinguishable from the first data.

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9. The method of claim 6, further comprising utilizing a temporary alternate placement designation for the first transmitter prior to transmitting the first and second data.

25 10. The method of claim 6, further comprising utilizing a temporary alternate placement designation for the first receiver prior to transmitting the first and second data.

11. An entity configured to facilitate interconnect and bridge fault testing, said entity comprising:

a signal connector configured to transmit a signal, wherein said connector is  
5 assigned a first placement designation; and

a control unit configured to:

transmit a first data via said signal connector, wherein said first data  
10 corresponds to said first placement designation, in response to  
detecting said first placement designation has been selected for a  
transmitter bridge test; and

transmit a second data different from said first data via said signal  
15 connector in response to detecting a placement designation different  
from said first placement designation has been selected for a  
transmitter bridge test;

transmit a third data via said signal connector, wherein said third data  
20 corresponds to a second placement designation, in response to  
detecting said signal connector is coupled to a first receiver, said  
second placement designation corresponds to said first receiver, and  
said second placement designation has been selected for a receiver  
bridge test;

25 transmit a fourth data different from said third data via said signal  
connector in response to detecting a placement designation different

from said second placement designation has been selected for a receiver bridge test.

5    12. The entity of claim 11, wherein said control unit is further configured to access a table, wherein said table is configured to associate signal connectors with placement designations.

10    13. The entity of claim 12, wherein said table is programmable.

14. The entity of claim 11, wherein said entity comprises a plurality of signal connectors, wherein each of said plurality of signal connectors are assigned a placement designation, and wherein no two adjacent signal connectors are assigned a same placement designation.

15    15. The entity of claim 11, wherein each of the first, second, third, and fourth data comprise a binary test pattern stream, and wherein the second data is distinguishable from the first data.

20    16. An entity configured to facilitate interconnect and bridge fault testing, said entity comprising:

a signal connector configured to receive a signal, wherein said connector is assigned a first placement designation; and

25    a control unit configured to:

receive a first data via said signal connector;

detect a fault in response to detecting:

said signal connector is coupled to a transmitter assigned a second placement designation;

5           said second placement designation has been selected for a transmitter bridge test; and

said first data does not correspond to said second placement designation;

10          detect a fault in response to detecting:

said first placement designation has been selected for a receiver bridge test; and

said first data does not correspond to said first placement designation.

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17.       The entity of claim 16, wherein said control unit is further configured to compare said first data to an expected data, wherein said expected data corresponds to a placement designation for a current test.

20       18.      The entity of claim 16, wherein said entity comprises a plurality of signal connectors, wherein each of said plurality of signal connectors are assigned a placement designation, and wherein no two adjacent signal connectors are assigned a same placement designation.

25       19.      A system configured to detect interconnect and bridge faults comprising:

a first entity including a first transmitter, wherein said first transmitter comprises a first signal connector, and wherein the first signal connector corresponds to a first placement designation; and

a second entity including a first receiver, wherein said first receiver comprises a second signal connector, and wherein said second signal connector corresponds to a second placement designation;

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wherein in response to detecting a transmitter test:

the first entity is configured to convey a first data which corresponds to  
said first placement designation, and the second entity is  
configured to expect to receive said first data, in response to  
detecting the selection of said first placement designation; and

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the first entity is configured to convey a second data different from said  
first data, in response to detecting the selection of a third  
placement designation which is different from said first placement  
designation;

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wherein in response to detecting a receiver test:

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the first entity is configured to convey a third data which corresponds to  
said second placement designation, and the second entity is  
configured to expect to receive said second data, in response to  
detecting the selection of said second placement designation; and

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the first entity is configured to convey a fourth data different from said  
third data, in response to detecting the selection of a fourth  
placement designation which is different from said second  
placement designation.

20. The system of claim 19, wherein both said first and second entities comprise a plurality of signal connectors, wherein each of said plurality of signal connectors are assigned a placement designation, and wherein no two adjacent signal connectors are  
5 assigned a same placement designation.
21. The system of claim 19, further comprising a table configured to associate signal connectors with placement designations.
- 10 22. The system of claim 21, further comprising a service processor separate from, but coupled to, said first and second entities, wherein said service processor is configured to program said table, and initiate said bridge test and said receiver test.
- 15 23. The system of claim 19, wherein each of the first, second, third, and fourth data comprise a binary test pattern stream, and wherein the second data is distinguishable from the first data.

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